HEADQUARTERS
AIR FORCE CAMBRIDGE RESEARCH CENTER
AIR RESEARCH and DEVELOPMENT COMMAND
UNITED STATES AIR FORCE

Laurence G. Hanscom Field Bedford, Massachusetts

IN REPLY, ADDRESS:
COMMANDER
ATTN: CRZC/H. P. Gauvin/3152

CRestview 4 6100
ext 3145
Boston Exchange

SUBJECT: Cine Spectrograph

TO: Mr. [redacted]
2430 E St. N. W.
Washington 25, D. C.

Dear [redacted]

1. This is the standard A.F. Gun Sight Aiming Point type N-9, 16 mm, camera, operating on 24 v d. c. A nosepiece with slit, lenses, and prism has been designed and attached to spread the spectrum across the frame. The wavelength region covered with this nosepiece is 4000 to 6200 Angstroms. The nosepiece of this combination cine spectrograph has a field of view of approximately 10° which therefore, requires only reasonable aiming.

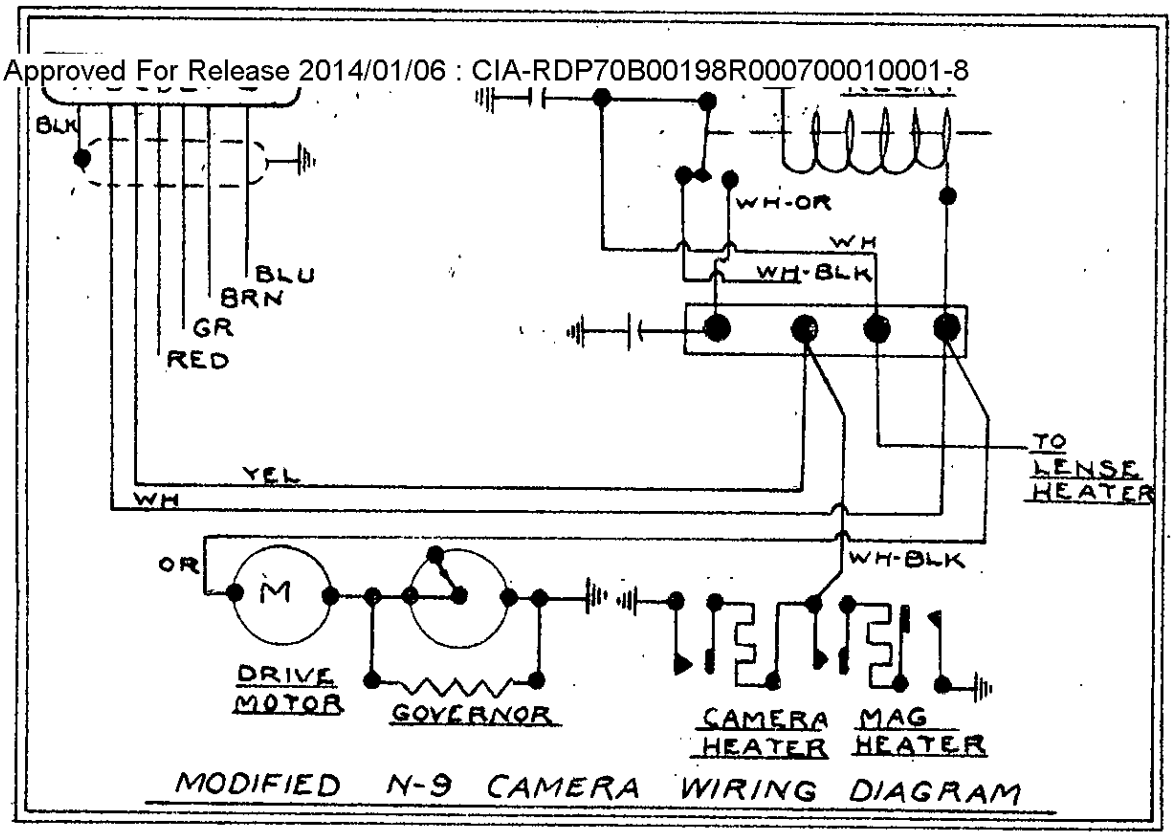
2. A principal point to consider is that the slowest present operating spread of this camera is 16 frames per second on 24 volts. This limits the exposure time such that the combination is not particularly sensitive. To get longer exposures the cameras could be run at lower voltages (possibly as low as 8 volts) and therefore have slower framing rates. We recommend leaving the aperture fully open initially. At present the 16 frames per second will see normal blue sky using Kodak 103-B film. The nosepiece should require no maintenance other than reasonably careful handling. We recommend any high speed visible film, possibly 103-B or Tri X. This 16 mm film must be loaded into the 50 ft. cartridges of which we're forwarding six empties. We do not have film readily available. Enclosed is a modified wiring diagram, operation handbook and parts list. We hope this is satisfactory for immediate use. Additional modification to this system would unquestionably obtain better data.

Sincerely yours,

Harvey P. Gauvin

HERVEY P. GAUVIN
Chief, Thermal Test Branch
Thermal Radiation Laboratory

1 Atch
Modified N-9 Camera
Wiring Diagram



MODIFIED N-9 CAMERA WIRING DIAGRAM

atch 1.